



Pursuant to the authority vested in the Air Resources Board by Sections 43013, 43018, 43101, 43102, 43104 and 43105 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-02-003;

IT IS ORDERED AND RESOLVED: That the following compression-ignition engines and emission control systems produced by the manufacturer are certified as described below for use in off-road equipment. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGINE FAMILY	DISPLACEMENT (liters)	FUEL TYPE	USEFUL LIFE (hours)
2009	9CPXL32.0ESX	32.0	Diesel	8000
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION	
Direct Diesel Injection, Turbocharger, Charge Air Cooler, Engine Control Module			Loader, Dozer, Pump and Industrial Equipment	

The engine models and codes are attached.

The following are the exhaust certification standards (STD), or family emission limit(s) (FEL) as applicable, and certification levels (CERT) for hydrocarbon (HC), oxides of nitrogen (NOx), or non-methane hydrocarbon plus oxides of nitrogen (NMHC+NOx), carbon monoxide (CO), and particulate matter (PM) in grams per kilowatt-hour (g/kw-hr), and the opacity-of-smoke certification standards and certification levels in percent (%) during acceleration (Accel), lugging (Lug), and the peak value from either mode (Peak) for this engine family (Title 13, California Code of Regulations, (13 CCR) Section 2423):

RATED POWER CLASS	EMISSION STANDARD CATEGORY		EXHAUST (g/kw-hr)					OPACITY (%)		
			HC	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
KW > 560	Tier 2	STD	N/A	N/A	6.4	3.5	0.20	20	15	50
		FEL	N/A	N/A	N/A	N/A	0.14	N/A	N/A	N/A
		CERT	--	--	5.7	0.9	0.06	8	2	14

BE IT FURTHER RESOLVED: That the family emission limit(s) (FEL) is an emission level declared by the manufacturer for use in any averaging, banking and trading program and in lieu of an emission standard for certification. It serves as the applicable emission standard for determining compliance of any engine within this engine family under 13 CCR Sections 2423 and 2427.

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the information and materials to demonstrate certification compliance with 13 CCR Section 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (emission control system warranty).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

This Executive Order is only granted to the engine family and model-year listed above. Engines in this family that are produced for any other model-year are not covered by this Executive Order.

Executed at El Monte, California on this 15 day of January 2009.

Annette Hebert, Chief
Mobile Source Operations Division

ATTACHMENT 1 OF 1

Engine Model Summary Template

u-R-001-0362

Engine Family	1.Engine Code	2.Engine Model	3 BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
9CPXL32.0ESX	Cert Test 2	C32	1350@1800	399	482.8	4551@1400	436	410.4	EM, DI, TC, <i>ECM</i>
9CPXL32.0ESX	1	C32	1505@2100	376	530.8	4422@1400	418	393.4	EM, DI, TC,
9CPXL32.0ESX	2	C32	1500@2100	376	530.8	4422@1400	418	393.4	EM, DI, TC,
9CPXL32.0ESX	5	C32	951@1800	266	322.7	3205@1400	298	280.3	EM, DI, TC,
9CPXL32.0ESX	6	C32	951@2100	238	336.9	3205@1400	298	280.3	EM, DI, TC,
9CPXL32.0ESX	7	C32	1124@1800	319	386.1	3792@1400	365	344.1	EM, DI, TC,
9CPXL32.0ESX	8	C32	1124@2100	279	393.6	3792@1400	365	344.1	EM, DI, TC,
9CPXL32.0ESX	9	C32	1200@1800	336	407.3	4045@1400	390	367.2	EM, DI, TC,
9CPXL32.0ESX	10	C32	1200@2100	301	425.9	4045@1400	390	367.2	EM, DI, TC,
9CPXL32.0ESX	11 Cert Engine	C32	1350@1800	384	464.7	4552@1400	438	412.4	EM, DI, TC,
9CPXL32.0ESX	12	C32	1350@2100	340	480.6	4552@1400	438	412.4	EM, DI, TC,
9CPXL32.0ESX	13	C32	1016@1750	294	345.9	3635@1300	349	305.4	EM, DI, TC,
9CPXL32.0ESX	14	C32	923@1800	257	311.4	3554@1300	345	302	EM, DI, TC,
9CPXL32.0ESX	17	C32	800@2100	209	296	2447@1350	249	227	EM, DI, TC,
9CPXL32.0ESX	18	C32	861@2100	216	306	2607@1400	264	249	EM, DI, TC,
9CPXL32.0ESX	19	C32	920@2100	244	345	3023@1400	312	294	EM, DI, TC,
9CPXL32.0ESX	20	C32	1110@2100	296	419	3743@1400	386	364	EM, DI, TC,
9CPXL32.0ESX	21	C32	1225@2100	327	462	4129@1400	425	400	EM, DI, TC,
9CPXL32.0ESX	22	C32	950@1600	295	317	3627@1200	350	282	EM, DI, TC,
9CPXL32.0ESX	23	C32	1110@2100	296	419	3743@1400	386	364	EM, DI, TC,
9CPXL32.0ESX	24	C32	800@2100	209	295	2473@1350	249	227	EM, DI, TC,
9CPXL32.0ESX	25	C32	920@2100	239	338	3023@1400	312	294	EM, DI, TC,
9CPXL32.0ESX	26	C32	1225@2100	327	462	4129@1400	425	400	EM, DI, TC,
9CPXL32.0ESX	27	C32	860@2100	221	313	2599@1400	263	248	EM, DI, TC,
9CPXL32.0ESX	29	C32	1050@1900	280	359	3686@1350	360	327	EM, DI, TC,
9CPXL32.0ESX	30	C32	943@1750	272	320	3585@1350	355	322	EM, DI, TC,
9CPXL32.0ESX	31	C32	970@1750	281	331	3461@1300	323	283	EM, DI, TC,
9CPXL32.0ESX	32	C32	1016@1750	296	349	3635@1300	336	294	EM, DI, TC,

* ECM for all models